

229



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,439	07/31/2001	Romelia Flores	BOC9-2000-0079(214)	4220
40987	7590	11/18/2004	EXAMINER	
AKERMAN SENTERFITT P. O. BOX 3188 WEST PALM BEACH, FL 33402-3188			VO, LILIAN	
			ART UNIT	PAPER NUMBER
			2127	

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/919,439	FLORES ET AL.	
	Examiner	Art Unit	
	Lilian Vo	2127	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 - 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) ✓           | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

1. Claims 1 –17 are pending.

### *Claim Rejections - 35 USC § 112*

2. Claims 1 – 7 and 10 - 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. **Claims 1 and 10** recite the limitation of allocating resources to the first set of workload tasks if adequate resource come available if the first set of workload tasks require processing. This is considered unclear. The examiner is not sure what applicants try to claim. Does it mean the first set of workload tasks might not require processing at all or does it mean it can be processed after it reduces part of its resource?

Furthermore, applicants' disclosure (specification page 12, lines 18 – 21) states that when unavailability of system resources dictate a transition be made to a lighter workload, the heavier workload can be processed as normal. The examiner is not sure what does applicants mean by "the heavier workload can be processed as normal" after the transitioning to a lighter workload because there is unavailability of the system resources.

A clarification is required to overcome this type of rejection.

Art Unit: 2127

4. **Claims 4 and 13** recite the limitation "the performance" in page 15, line 6 and page 18, line 8. There is insufficient antecedent basis for this limitation in the claim.

5. **Claim 9** recites the limitation "said diminished workload" in page 16, line 8. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, 8 – 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hluchyj et al. (US 5,488,609, hereinafter Hluchyj).

8. Regarding **claim 1**, Hluchyj discloses a method for providing dynamic workload transition in an application server for an e-business system (abstract), comprising:

detecting an overload condition in the e-business system (abstract, col. 5, lines 25 – 30);

reducing system resources allocated to a first set of workload tasks in the e-business system (col. 4, lines 27 – 39: partially retrieve allocated resources from existing connections);

allocating at least part of said reduced system resources to a second set of lighter workload tasks in the e-business system (col. 4, lines 27 – 39: temporary reduction of the rate for an existing connection to make room for an incoming switched connection that does not last

long. Dynamic rate adjustment is connection management procedure for controlling the rates of certain connections in order to free up resources on selected, or marked links for reallocation).

With respect to the step of allocating resource to the first workload tasks if it requires processing when there is adequate resources become available, Hluchyj discloses that the source of each connection, whose rate is subject to dynamic adjustment, examines the path supporting the connection periodically or based on an event trigger such that if all the links along the path are unmarked, the rate of the connection is increased from its previously agreed level to the requested level, provided the previously agreed level is lower than the requested and that the dynamic rate adjustment scheme may be implemented based on available capacity (col. 5, lines 1 – 18). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made to recognize that the dynamic rate adjustment such as the increased from the lower level to the higher level shows the step of allocating of the adequate resource as it become available to fulfill the request.

9. Regarding **claim 2**, Hluchyj discloses the detecting step further comprises monitoring system parameters in the e-business system (col. 4, lines 35 – 59); and analyzing said monitored system parameters to determine when said overload condition occurs in the e-business system (col. 4, lines 35 – 59: a link may be marked when it is overloaded).

10. Regarding **claim 8**, Hluchyj discloses a method for providing dynamic workload transition in an application server for an e-business system, comprising:

Art Unit: 2127

processing a workload assigned to a workload driver (abstract, col. 5, lines 25 – 31);  
monitoring system resources to detect an overload condition while processing said workload (abstract, col. 5, lines 25 – 30);

allocating processing resources to a lighter workload when said workload driver detects a system overload condition caused by said processed workload during said monitoring step (col. 4, lines 27 – 39: temporary reduction of the rate for an existing connection to make room for an incoming switched connection that does not last long. Dynamic rate adjustment is connection management procedure for controlling the rates of certain connections in order to free up resources on selected, or marked links for reallocation).

With respect to the step of allocating resource to the first workload tasks if it requires processing when there is adequate resources become available, Hluchyj discloses that the source of each connection, whose rate is subject to dynamic adjustment, examines the path supporting the connection periodically or based on an event trigger such that if all the links along the path are unmarked, the rate of the connection is increased from its previously agreed level to the requested level, provided the previously agreed level is lower than the requested and that the dynamic rate adjustment scheme may be implemented based on available capacity (col. 5, lines 1 – 18). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made to recognize that the dynamic rate adjustment such as the increased from the lower level to the higher level shows the step of allocating of the adequate resource as it become available to fulfill the request.

Art Unit: 2127

11. Regarding **claim 9**, Hluchyj discloses a system for providing dynamic workload transition in an e-business system, comprising:

an application server for receiving work requests and for processing workloads identified by said work requests (abstract, col. 5, lines 25 – 31);

a workload driver for handling workload management of said application server, said handling comprising diminishing processing of a currently processed workload which causes an overload condition, and initiating the processing of a lighter workload, said lighter workload having a lighter load than said diminished workload (col. 4, lines 27 – 39: temporary reduction of the rate for an existing connection to make room for an incoming switched connection that does not last long. Dynamic rate adjustment is connection management procedure for controlling the rates of certain connections in order to free up resources on selected, or marked links for reallocation).

With respect to the limitation where a status driver for reporting system data to said workload driver, said system data providing information regarding the existence of said overload condition, Hluchyj discloses that a node is responsible for monitoring the link's status and that dynamic rate adjustment is connection management procedure for controlling the rates of certain connections in order to free up resources on selected, or marked links for reallocation (col. 4, lines 35 – 59). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made to recognize that there is a communication between the monitoring status and the workload management because of the provided information regarding the existence of the overload condition.

Art Unit: 2127

12. **Claims 10 – 11 and 17** are rejected on the same ground as stated in claims 1 – 2 and 8 above.

13. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hluchyj et al. (US 5,488,609, hereinafter Hluchyj) as applied to claims 1 and 10 above, and in view of Culbert (US 5,838,968).

14. Regarding **claim 3**, Hluchyj discloses the monitoring of the resource utilization but did not clearly disclose that the monitored system parameters comprise CPU utilization, disk I/O and memory utilization. Nevertheless Culbert discloses of the monitoring system parameters including CPU utilization, disk I/O and memory utilization (col. 5, lines 21 – 40, col. 8, lines 1 – 18, col. 12, lines 51 – 63). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to incorporate Culbert's teaching to Hluchyj so that system performance can be monitored as resource utilization are dynamically managed.

15. **Claim 12** is rejected on the same ground as stated in claim 3 above.

16. Claims 4 – 7 and 13 - 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Culbert (US 5,838,968) in view of Ishidera (US Pat. Application Publication 2002/0040442).

17. Regarding **claim 4**, Culbert discloses a method for providing dynamic workload transition in an application server for an e-business system (abstract), comprising:



Art Unit: 2127

receiving a first work request (col. 9, lines 15 – 23);

determining the workload of said first work request (col. 9, lines 15 – 23, 40 – 46: tasks requests more resources);

comparing said determined workload of said first work request to available system resources to determine if the performance of said first work request is capable of causing a system overload condition (col. 9, lines 15 – 46: tasks have difficulty gaining access to needed resources if the resource becomes more constrained).

Culbert discloses the step of retrieving resource from an existing task with degradation where a task is asked to give up some of its resources and move to a lower run level when resource becomes constrained (col. 9, lines 15 – 46), which then requiring less resource. Culbert however did not disclose the step of transitioning to a second lighter work request to prevent the system overload condition. Nevertheless, the concept of preventing the system overload condition by switching to perform a lighter load or assigning requests/tasks to a lighter load is considered well know in the art for balancing workload. Additionally, the concept can be seen in Ishidera's disclosure in which when the determination result indicative of the operating environment requiring power saving based on the operating status on the battery, the switching unit switches the process to a process of a light load processing unit and executes an animation displaying process of relatively light load on the CPU (page 3, paragraph 33). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to incorporate the concept from Ishidera's to Culbert so that quality of service can still be maintained at the same time while efficiently managing resource to avoid the overload condition.

Art Unit: 2127

18. Regarding **claim 5**, Culbert discloses the analyzing said monitored system parameters to determine when the overload condition occurs (fig. 3, col. 8, lines 24 – 59: update resource measurement. Col. 9, lines 15 – 46: tasks have difficulty gaining access to needed resource when resource become constrained.)

19. Regarding **claim 6**, Culbert discloses the monitoring system parameters including CPU utilization, disk I/O and memory utilization (col. 5, lines 21 – 40, col. 8, lines 1 – 18, col. 12, lines 51 – 63).

20. Regarding **claim 7**, Culbert discloses the step of reporting the system parameters to a workload driver (col. 10, lines 10 – 67: resource manager gets the update of the tasks resource utilization record).

21. Claims 13 – 17 are rejected on the same ground as stated in claims 4 – 7 above.

### ***Conclusion***

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 571-272-3774. The examiner can normally be reached on Monday - Thursday, 7:30am - 5pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2127

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lilian Vo  
Examiner  
Art Unit 2127

lv  
November 10, 2004

  
**MENG-AL T. AN**  
**SUPERVISORY PATENT EXAMINER**  
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